

WEEK 2 JANUARY • ~5 MIN READ • ONTARIO CONSTRUCTION

Cold Stress & Frostbite

At a wind chill of -28°C , exposed skin can freeze in 10 to 30 minutes — and the part that catches people is that you often can't feel it happening. Frostbite and hypothermia both work quietly, and both get handled badly by well-meaning crews trying to help.

The hazard

Cold pulls heat out of you faster than you make it, and wind and wet speed that up a lot. Frostbite freezes skin and the tissue underneath, usually fingers, toes, ears, nose, and cheeks. Hypothermia is your core temperature dropping — and because it goes after judgement early, the person affected is the last one to know. The thermometer alone won't tell you where you stand: wind chill is what decides how fast exposed skin freezes.

What to do

- ▶ **Work off the wind chill, not the thermometer** — and the numbers below are Celsius, same as the forecast. From about -10 to -27°C there's a real risk of frostbite and hypothermia over a long shift. From **-28 to -39°C the risk is high and exposed skin can freeze in 10 to 30 minutes**. Colder than that and it's minutes. Check today's number and set the break schedule from it.
- ▶ **Warm-up breaks come before you're shivering hard**, in somewhere genuinely warm, and get more frequent as the wind chill drops.
- ▶ **Layer properly**: a base that wicks, an insulating middle, a wind- and waterproof shell. Nothing cotton next to the skin.
- ▶ **Cover the spots that go first** — insulated gloves, a neck gaiter, and a winter liner **made to work with your hard hat**. A toque jammed under the shell changes how the hat sits and how it protects you; use one the helmet manufacturer allows.
- ▶ **Drink warm fluids through the day. No alcohol** — that's a fit-for-work rule and it doesn't move with the weather. It's also a poor way to warm up after the shift: alcohol speeds up how fast you lose heat while making you feel warmer.
- ▶ **Keep dry spares on site** — socks, gloves, a base layer. Wet is what turns a manageable day into a cold injury.

Frostbite: what to do, and what not to

Numbness or tingling, and skin that's gone hard or waxy to the touch, are the signs to work from. There may be a colour change — white, grey, or a difference from the skin around it — but it isn't reliable on every skin tone, so don't wait for it.

- ▶ **Get them inside and stop the area getting any colder**. Cover it loosely, don't rub or massage it, and take off anything wet or constricting.
- ▶ **Do not try to thaw it out here**. Rewarming a frostbitten area on site is not the crew's job — tissue that thaws and then refreezes on the way back out is far worse off than tissue that stayed frozen. Stop the cooling, then get medical care.

Hypothermia: this is an emergency

Slurred speech, stumbling, clumsy hands, confusion, or "I'm fine" when clearly not — treat that as hypothermia and act on it.

- ▶ **Call 911.** Don't wait to see if a coffee sorts it out.
- ▶ **Handle them gently. No rubbing, no massaging.** Let them lie down — no standing them up and walking them around.
- ▶ **Get them out of the wind, insulated from the ground, and out of wet clothing** where you can do it without chilling them further.
- ▶ **A warm drink only if they're fully conscious and responsive** and can swallow properly. Nothing alcoholic, and no smoking.
- ▶ **Shivering easing off is not improvement.** As hypothermia gets worse, shivering weakens and then stops altogether. Someone who's stopped shivering and is still cold and confused is going the wrong way, fast.

Watch out for

- ▶ Anyone wet, tired, or hungry — they'll feel it much sooner.
- ▶ New crew members. They need time to get used to working in these conditions, and closer supervision while they do — mostly because they don't know our plan yet, not because they freeze faster than anyone else.
- ▶ The quiet one. Cold shows up as someone going silent and slow before they'll ever say anything.

Talk it over

- ▶ What's the wind chill right now, and does our break schedule actually match it?
- ▶ If someone came in with hard, waxy fingers — what do we do, and just as importantly, what do we not do?

A SIGNATURE PROVES ATTENDANCE. DASHPOT
PROVES UNDERSTANDING.



Get a new toolbox talk every week — free.

Dashpot Safety turns the morning talk into a per-worker record of what each crew member actually understood, by SMS in about five minutes.

SCAN FOR THE FULL LIBRARY →
[DASHPOT.CA/TOOLBOX-TALKS](https://dashpot.ca/toolbox-talks)

This toolbox talk is general safety information for Ontario construction — not legal advice, and not a substitute for your own site-specific hazard assessment, worker training, and health-and-safety program. Follow the current Occupational Health and Safety Act and its regulations, manufacturer instructions, and your employer's procedures. Provided as-is, without warranty — you use it at your own risk.